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FIRST RECORD OF THE SUBGENUS *AUGOLESTHUS* S. STR. MOTSCHULSKY FROM CHINA, WITH DESCRIPTION OF A NEW SPECIES (COLEOPTERA, TENEBRIONIDAE, CNODALONINI)

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Abstract A new species of the subgenus *Augolesthus* s. str. Motschulsky, 1872, *A.* (s. str.) *dentatus* sp. nov. (China, Yunnan), is described. Habitus photos of both adult male and female, as well as illustrations of genitalia, are provided. This is the first record of this nominotypical subgenus in China. Type specimens of the new species are deposited in the Hebei University Museum, Baoding, China.

Key words Coleoptera, Tenebrionidae, Cnodalonini, *Augolesthus*, new species, China.

The genus *Augolesthus* was erected by Motschulsky (1872) with *Augolesthus purprueofasciatus* Motchulsky, 1872 as the type species. Based on *Eucyrtus carbunculus* Fairmaire, 1885, Kulzer (1952) proposed the genus *Chrysomaia* which was later synonymized with the genus *Augolesthus* by Kaszab (1983). Masumoto (1986) described *A. kurosawai* from China (Taiwan) and *A. thailandicus* from Thailand. In a subsequent publication, on the basis of characteristics of elytra and protibiae, Masumoto (1993) erected the subgenus *Falsoaugolesthus* with *A. pulcher* (Pic 1927) as type species, and thus divided the genus into 2 subgenera, namely subgenus *Augolesthus* s. str. and subgenus *Falsoaugolesthus*. Since then, Masumoto (2001) and Utsunomiya (2007) described *A.* (s. str.) *yoshihikoi* and *A. satoi* respectively, both occurring in Sumatra. At the present time, this genus is endemic to the Oriental Region and comprises 11 previously known species, of which 9 belong to the subgenus *Augolesthus* s. str. and 2 belong to the subgenus *Falsoaugolesthus*. Among them, only 1 species, namely *Augolesthus* (*Falsoaugolesthus*) *kurosawai* Masumoto, 1986, has been recorded from China (Taiwan).

In our recent study on *Augolesthus*, we discover a new species located in Yunnan, China. Based on the characters of elytra with a transverse basal depression and distinctly thickened protibiae, it should be placed in the subgenus *Augolesthus* s. str. which is recorded from China for the first time. In the present paper, the new species *A.* (s. str.) *dentatus* sp. nov. is described and habitus photos of both adult male and female, as well as illustrations of genitalia, are provided.

All specimens used in this study are in the collection of the Museum of Hebei University (MHBU). They were examined and illustrated under a Nikon SMZ800 stereomicroscope and measured with an ocular micrometer. Lengths and widths are the maximum values of the measured parts. Total length is the distance from the clypeus to the elytral apex with the head in its natural position. Photographs of the adults were taken with a keyence VHX-100 digital microscope.

***Augolesthus* (s. str.) *dentatus* sp. nov.** (Figs 1 – 9)

Male (Fig. 1). Body elongate, winged, gently convex dorsad, dorsal surface strongly metallically shining, ventral surface weakly shining; head, pronotal hypomera, scutellum, pro-, meso-, metasternum, femora, tibiae dark bluish green with golden luster under a certain light; pronotum, except for hypomera, bluish green with purplish luster under a certain light; elytra bluish purple in major parts, with basal fourth greenish blue; antennae, tarsi, abdominal sternites dark brown.

Head subhexagonal, rather closely punctuate throughout, strongly raised posterorly, broadest across eyes, 0.54 – 0.60 (0.57 on average, $n = 3$) times as wide as pronotum. Labrum transverse, covered with yellow setae anteriorly, with clypeolabral membrane exposed. Clypeus rather broad, moderately convex, its front margin slightly emarginated. Frontoclypeal suture well developed, extending obliquely and then reaching outer margin. Genae oblique, gently arched, feebly produced laterad. Frons broad, inclined forward. Ocular sulci deep, extending to rear of eyes, slightly diverging from each other. Eyes medium-sized, transverse, gently convex laterad, distance

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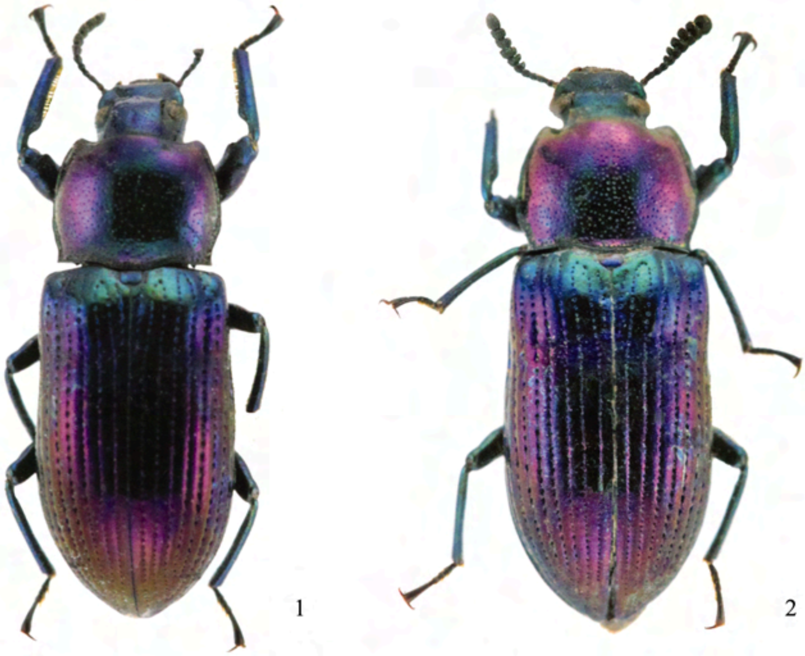
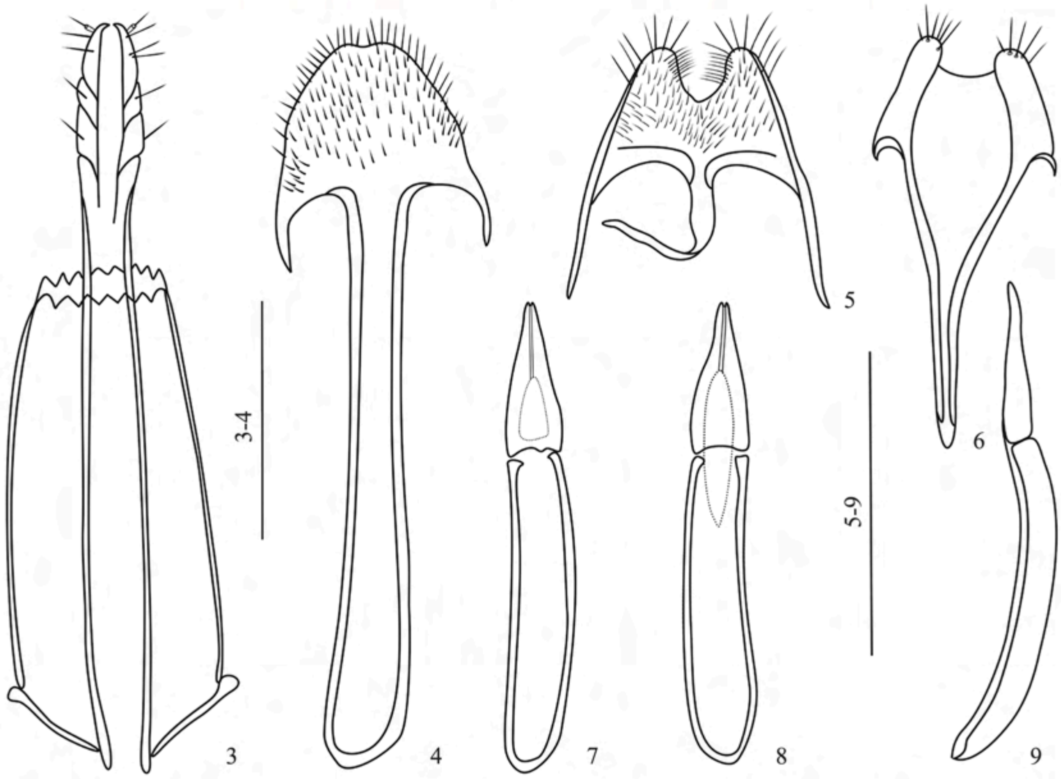


Figs 1 – 2. *Augolesthus* (s. str.) *dentatus* sp. nov., dorsal view. 1. ♂. 2. ♀.



Figs 3 – 9. *Augolesthus* (s. str.) *dentatus* sp. nov. 3 – 4. ♀. 5 – 9. ♂. 3. Ovipositor. 4. Spiculum ventrale. 5. Abdominal sternite Ⅷ. 6. Spiculum gastrale. 7 – 9. Aedeagus. 3 – 6, 8. Ventral view. 7. Dorsal view. 9. Lateral view. Scale bars = 1 mm.

between them 2.31 – 2.91 (2.62 on average, *n* = 3) times as wide as the transverse diameter of an eye (in dorsal view). Antennae subcapitate, rather short, hardly reaching the middle of pronotum, gently pubescent; six apical segments widened and flattened, with shallow sensory pores, more densely pubescent than basal ones; terminal segment subquadrate; length (width) ratio of 2nd – 11th antennal segments 12 (15) : 20 (15) : 15 (15) : 15 (17) : 16 (25) : 20 (30) : 23 (34) : 24 (35) : 25 (36) : 34 (35).

Pronotum subquadrate, 1.26 – 1.39 (1.32 on average, n = 3) times as wide as long, widest at basal third, base wider than apex; anterior margin widely, gently emarginated, feebly produced in middle, neither bordered nor margined; base bisinuate and clearly bordered; sides moderately declined to lateral margins which is entirely bordered, arcuate and rather noticeably sinuate before base; disc convex, moderately scattered with punctures; hypomera irregularly and coarsely punctuate, punctures larger than those on disc; front angles obtusely produced forwards, hind angles acute and its apex directed posterolaterad. Scutellum shortly linguiform, sparsely scattered with small punctures.

Elytra subparallel-sided, with developed shoulders, 1.81 – 1.83 (1.82 on average, n = 3) times as long as wide, 2.63 – 2.89 (2.76 on average, n = 3) times the length and 1.10 – 1.20 (1.15 on average, n = 3) times the width of pronotum, widest at apical fourth, feebly narrowed to front and roundly so to rear from the broadest point; dorsum distinctly transversely depressed at basal fourth, but noticeably swollen at basal eighth (before the depression); disc rather strongly punctate-striate, intervals weakly convex, feebly shagreened, scattered with microscopic punctures; sides noticeably compressed at basal fourth; apex gently produced.

Mentum subcordate, slightly elevated in middle, irregularly and coarsely punctuate, each puncture with a distinct, short seta. Gula parabolic and microshagreened, with a short impression on each side along lateral suture anteriorly. Terminal segment of maxillary palpus rather large, securiform.

Prosternum microshagreened, scattered with microscopic punctures; prosternal process clearly margined, gently raised and dilated between coxae, then bending downwards, acuminate at the apex. Meso-, metasternum microshagreened, finely punctate, weakly shiny.

Legs finely punctate and microscopically pubescent. Profemora with an obtuse tooth on inner ventral margin near apex. Protibiae with inner ventral margin remarkably widened at basal third, noticeably gouged and haired in apical two-thirds of ventral face; hairs long and curly, arranged in two rows. Tarsi with yellow setae ventrally.

Abdominal sternites finely punctate, gently shiny, covered with extremely microscopical pubescence. Abdominal sternite Ⅷ (Fig. 5) entirely densely covered with fine setae, forming a deep emargination at apical margin.

Aedeagus (Figs 7 – 9) slender, length 1.60 mm, width 0.23 mm, feebly constricted in an area between basal piece and parameres, very slightly twisted at base in lateral view; parameres short (length 0.48 mm, width 0.19 mm), regularly curved in apical part in lateral view. Spiculum gastrale (Fig. 6) relatively short, with large apical lobes.

Body length 7.6 – 8.0 mm, width 2.8 – 3.0 mm.

Female (Fig. 2). Body length 7.4 – 9.6 mm, width 2.6 – 3.4 mm, somewhat lager than male. Protibiae also widened at basal third as male, but without long hairs in apical two-thirds.

Ovipositor (Fig. 3) very elongate, consists of paraprocts and coxites. Paraprocts membranous, partly enclose the base of the coxites, with two pairs of baculi, namely basal transverse paraproct baculi and lateral longitudinal extra baculi which link the paraproct baculi with the proctiger. Coxites 4-lobed, the fold between lobes 3 and 4 fine; basal lobe with a pair of longitudinal baculi, elongate (length ca. 2.59 mm), 4.53 times as long as three apical lobes combined (length ca. 0.57 mm); gonostyles with apices bearing a few cerci, attached dorsolaterally to coxites. Spiculum ventrale (Fig. 4) with well-developed median shaft.

Diagnosis. The new species resembles *A. thailandicus* Masumoto, 1986, but can be distinguished from the latter by profemora with an obtuse tooth on inner ventral margin near apex in both sexes. It is also similar to *A. yoshihikoi* Masumoto, 2001, from which it differs by clypeus with front margin very slightly but widely emarginated (noticeably triangularly emarginated in *A. yoshihikoi*).

Holotype ♂, China, Yunnan, Cangyuan County, Banhong Town (23.3° N, 99.1° E), alt. 1 130 m, 16 – 18 July 2008, XU Ji-Shan and GAO Zhen-Hua leg. Paratypes: 2 ♂♂, 4 ♀♀, same data as holotype. The type specimens are deposited in the Hebei University Museum, Baoding, China (HBUM).

Etymology. The specific name is derived from the Latin word *dentatus*, referring to profemora with an obtuse tooth near apex.

Remarks. The holotype lacks right antennomeres Ⅶ – Ⅺ and right mesotarsus.

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中国光轴甲属一新纪录亚属及一新种记述（鞘翅目，拟步甲科，轴甲族）

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摘　要　报道中国新纪录亚属，光轴甲指名亚属 subgenus *Augolesthus* s. str. Motschulsky，1872，并记述采自云南省沧源县班洪的 1 新种，具齿光轴甲 *Augolesthus*（s. str.）*dentatus* sp. nov.，绘制雌、雄外生殖器特征图，并提供了雌、雄成体背面观照片，模式标本保存于河北大学博物馆。

具齿光轴甲，新种 *Augolesthus dentatus* sp. nov.（图 1 ~ 9）

新种与泰国光轴甲 *A. thailandicus* Masumoto，1986 及良彦光轴甲 *A. yoshihikoi* Masumoto，2001 相似，但前者前足腿节无齿，后者唇基前缘具 V 型深凹而与新种相区别。

正模 ♂，2008-07-16 ~ 18，云南沧源县班洪乡，海拔 1 130 m，徐吉山、郜振华采。副模：2 ♂♂，4 ♀♀，同正模。

词源：新种种名源自前足腿节下侧端部具齿。

关键词　鞘翅目，拟步甲科，轴甲族，光轴甲属，新种，中国.

中图分类号　Q969. 498. 2

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